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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/606,468	06/26/2003	Xing Yuan	IGC-104	3504

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George L. Rideout, Jr.
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EXAMINER

CASTELLANO, STEPHEN J

ART UNIT	PAPER NUMBER
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3727

DATE MAILED: 09/30/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/606,468

Applicant(s)

YUAN, XING

Examiner

Stephen J. Castellano

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) 6,7,9,11,13 and 14 is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-5,8,10,12 and 15 is/are rejected.
- 7) ☒ Claim(s) 1-5 is/are objected to.
- 8) ☒ Claim(s) 1-15 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 September 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: ____.

This application contains claims directed to the following patentably distinct species of the claimed invention:

Group I: Fig. 4(a);

Group II: Fig. 4(b);

Group III: Fig. 4(c); and

Group IV: Fig. 5.

Applicant is required under 35 U.S.C. 121 to elect a single disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable. Currently, claims 1 and 8 appear generic.

Applicant is advised that a reply to this requirement must include an identification of the species that is elected consonant with this requirement, and a listing of all claims readable thereon, including any claims subsequently added. An argument that a claim is allowable or that all claims are generic is considered nonresponsive unless accompanied by an election.

Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which are written in dependent form or otherwise include all the limitations of an allowed generic claim as provided by 37 CFR 1.141. If claims are added after the election, applicant must indicate which are readable upon the elected species. MPEP § 809.02(a).

Should applicant traverse on the ground that the species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the

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examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.

During a telephone conversation with Mr. George Rideout on September 21, 2005 a provisional election was made with traverse to prosecute the invention of Group I: Fig. 4(a), claims 1-5, 8, 10, 12 and 15. Affirmation of this election must be made by applicant in replying to this Office action. Claims 6, 7, 9, 11, 13 and 14 have been withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the bottom support in combination with the side support as stated in claims 2 and 3 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claims 2 and 3 are objected to because the bottom support in combination with the side support has not been shown in a drawing.

Claims 1-5 are objected to because the word "elevated" is misspelled in line 12 of claim 1.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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Claims 5, 10 and 12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 5 recites the limitation "the main cooling medium" in line 2. There is insufficient antecedent basis for this limitation in the claim.

Claim 10 recites the limitation "said mating structure means" in line 1. There is insufficient antecedent basis for this limitation in the claim because it isn't clear which means is meant, the means for preventing rotational movement or the means for preventing axial movement.

Claim 12 recites the limitation "said mating structure means" in line 1. There is insufficient antecedent basis for this limitation in the claim because it isn't clear which means is meant, the means for preventing rotational movement or the means for preventing axial movement.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-4, 6, 8 and 12 are rejected under 35 U.S.C. 102(b) as being anticipated by Reinker et al. (Reinker).

Reinker discloses an apparatus securing an inner vessel (2) within an outer vessel (4), the vessel is rotated so that the longitudinal axes of both inner and outer vessels are vertically upright, said apparatus comprising bottom support components (components of support system 6

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at the lower end, there are two shown in Fig. 1), the support component includes at least one mating pair of one male (pick one of the clevis pins 12, 22, 33, 36 as shown in Fig. 2 and 3) and one female parts (pick a bore that corresponds to the clevis pin), once assembled the clevis pins and bores are secured to both the bottom of the inner vessel and the bottom of the outer vessel. Alternatively, the support component could be the mating pair that includes a male part (link 11, 21) and the corresponding female part (connector 10, 20, respectively). The bottoms of the vessels include only that portion of the lower side wall that includes attachment to the bottom supports 6.

Re claims 2 and 3, the side support component is the upper supports 6 (three shown in Fig. 1), the upper support provide a fastening mechanism (clevis pins), two female parts and a connecting pin element.

Claims 8 and 12 are rejected under 35 U.S.C. 102(b) as being anticipated by Huang.

Huang discloses an apparatus securing an inner vessel to an outer vessel, the apparatus comprises a pin-like or round peg stub (72, 74, 76) mating within a socket or peg securing means, this type of connection prevents both rotational and axial movements.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 5, 6, 10 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Reinker in view of de Chazal.

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Re claim 5, Official notice is taken that liquid nitrogen is a well known cooling medium. It would have been obvious to add liquid nitrogen main cooling medium to the cryostat to maintain the low temperature of the cryostat.

Re claim 6, 10 and 15, Reinker discloses the invention except for the square peg and square peg securement. De Chazal teaches a square peg and square peg securement. It would have been obvious as a matter of design choice to change the shape of the peg cross section and the corresponding shape of the securement to be square as applicant has not assigned any particular criticality to a square profile over the many profiles disclosed, the square profile would resist rotational movement about an axis normal to the square cross section and would resist movement of the peg within its securement to provide greater stability.

Claims 10 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Huang in view of de Chazal.


Huang discloses the invention except for the square peg and square peg securement. De Chazal teaches a square peg and square peg securement. It would have been obvious as a matter of design choice to change the shape of the peg cross section and the corresponding shape of the securement to be square as applicant has not assigned any particular criticality to a square profile over the many profiles disclosed, the square profile would resist rotational movement about an axis normal to the square cross section and would resist movement of the peg within its securement to provide greater stability.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stephen J. Castellano whose telephone number is 571-272-4535. The examiner can normally be reached on Tu-F 6:30-5.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nathan J. Newhouse can be reached on 571-272-4544. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Stephen J. Castellano
Primary Examiner
Art Unit 3727

sjc